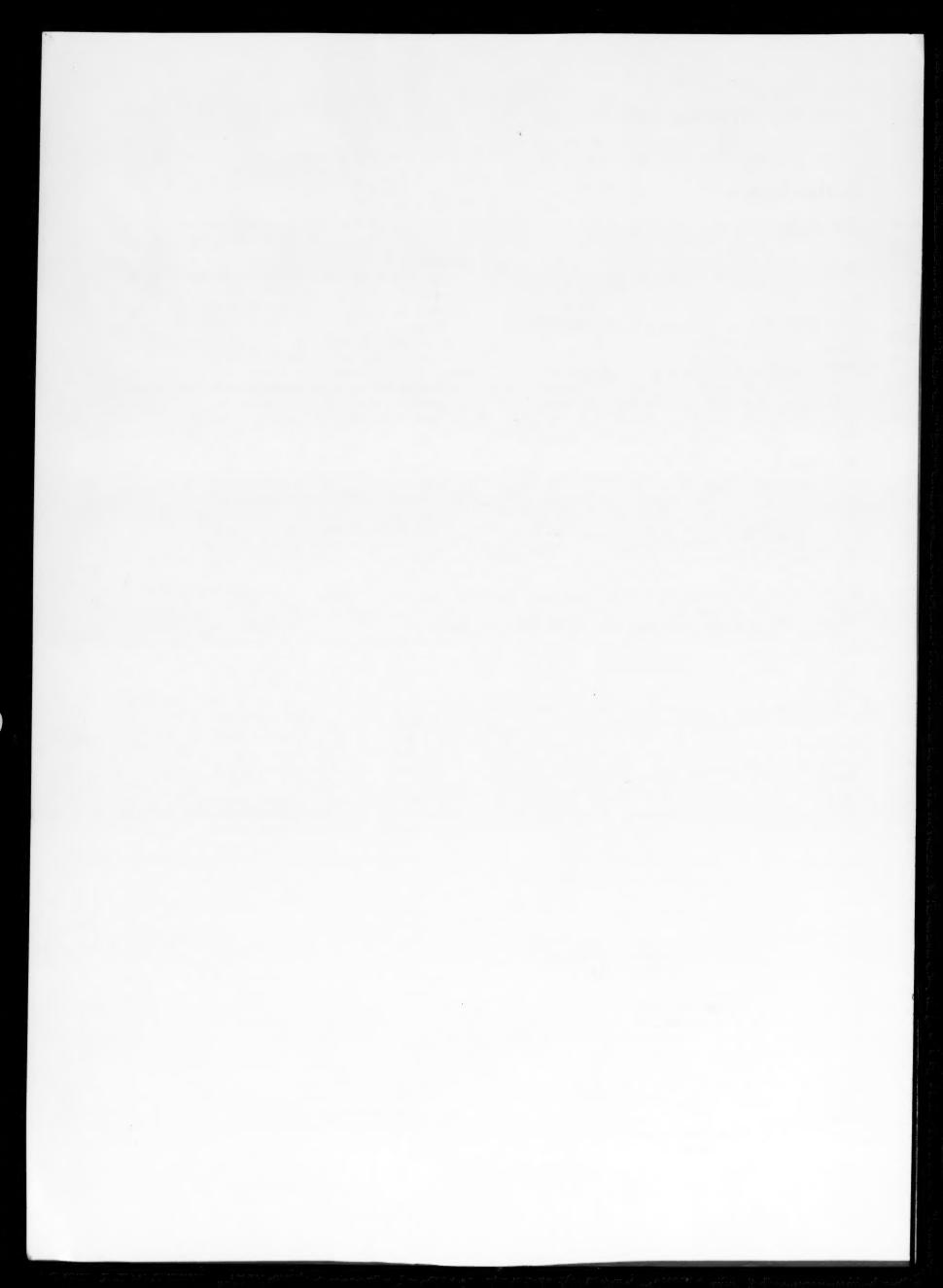
## **Author Index**

Arridge, R. G. C., 125	Heald, S. M., 45	Mishra, R. S., L21
	Hsueh, CH., 115	Miyamoto, Y., 207
Bang, K., L1	Hu, C. T., 247	Mukherjee, K., 167
Barrera, E. V., 45	Hu, Z. Q., 221	Murakami, K., 207, 227
Benci, J. E., 51		
Birringer, R., 33	Inal, O. T., 167	Nakazono, S., 207
Blucher, J., L1	, 0.1., 107	- · · · · · · · · · · · · · · · · · · ·
	Jackson, A. G., 11	Okamoto, T., 207, 227
Cădek, J., L5	Jones, H., L21	Okazaki, K., 75
Chao, P. T., 191	, ,	Omlor, R. E., 11
Chen, NP., 157	Kaesche, H., L1	J. 11 2., 11
Christ, HJ., L25	Kao, PW., 143	Dol. H. D. 167
Chumbley, L. S., 59	Ke, YB., 149	Pak, HR., 167
Cizeron, G., 175	Kim, YW., 19	Pak, J. S. L., 167
Cornie, J. A., 199	Korbel, A., L31	Paruz, H., 67
Cotterell, B., 149	Kostorz, G., L17	Plumtree, A., 157
		Pope, D. P., 51
De Angelis, R. J., 75	Kozubski, R., L17	
Delamore, G. W., 255	Krishnamurthy, S., 19	Ren, JC., 235
Do'Hi, T., 227	Kwon, H., 133	Robertson, E., 11
Downing, H. L., 59		
Duan, J. Z., 3	Laird, C., 83, 95, 103	Schwander, P., L17
Dybiec, H., L31	Leu, S. S., 247	Servant, C., 175
	Li, Q., 199	Shen, P., 191
Edmonds, D. V., 67	Li, Y. Y., 221	Soltys, J., L17
	Liang, FL., 83, 95, 103	Song, J. S., 133
Fisher, R. M., 3	Liu, J., 221	Spitzig, W. A., 59
Fox, A. G., 3	Lu, MC., 115	Spitzig, W. Pt., 37
Froes, F. H., 19		
,	Mai, YW., 149	Tang, NY., 157
Gan, D., 141	Maier, H. J., L11	Todd, J. A., 235
Gibson, M. A., 255	Marcus, H. L., 45	
Giessen, B. C., L1	Masur, L. A., 199	Verhoeven, J. D., 59
Greenwood, G. W., L21	Mathews, V. K., 75	
Gross, T. S., 75	Megusar, J., 199	Yao, KF., 157
Grujicic, M., 215	Michatek, A., L17	You, R. K., 141
Orașioio, iri., 210		104, 14, 14, 141



## **Subject Index**

Aging

dynamic strain aging in Czochralski-grown silicon single crystals, 75

Alloys

investigation into the structural evolutions of a low alloy steel during tempering, 175

phase transformations in (Ni,Cu)<sub>3</sub>Sn alloys, 167

plastic deformation: a major factor in hydrogen embrittlement of low alloy steel, L11

rapid solidification and self-annealing of Fe-C-Si alloys by low pressure plasma spraying, 207

rapid solidification of lightweight metal alloys, 19

rapidly solidified thick deposit layers of Fe-C-Mo alloys by flame spraying, 227

the mechanism of superplastic flow in an Al-Mg alloy,

Aluminium

a high resolution transmission electron microscopy study of SiC-coated graphite fiber-aluminum composite, 199 mechanical properties of Fe-30Mn-10Al-1C-1Si alloy, 141

morphology of zirconia in Y-PSZ sintered with Ni<sub>2</sub>AlTi, 191

the mechanism of superplastic flow in an Al-Mg alloy, L31

up-quenching effect on the stabilization process of a Cu-Zn-Al martensite, 247

Annealing

rapid solidification and self-annealing of Fe-C-Si alloys by low pressure plasma spraying, 207

Austenite

the effect of cold work on the precipitation kinetics of an advanced austenitic steel, 235

Boror

crystallization of low silicon content Fe-Si-B metallic glasses, 255

Carbon

a high resolution transmission electron microscopy study of SiC-coated graphite fiber-aluminum composite, 199 coherent precipitation of M<sub>2</sub>C carbides in AF1410 steel, 215

effects of nickel additions on the fracture behavior of tempered martensite in medium-carbon 6W steel, 133

mechanical properties of Fe-30Mn-10Al-1C-1Si alloy, 141

rapid solidification and self-annealing of Fe-C-Si alloys by low pressure plasma spraying, 207

rapidly solidified thick deposit layers of Fe-C-Mo alloys by flame spraying, 227

Cavity growth

on the cavity-growth-model-based prediction of the stress dependence of time to creep fracture, L5

Cold working

the effect of cold work on the precipitation kinetics of an advanced austenitic steel, 235

Composites

a high resolution transmission electron microscopy study of SiC-coated graphite fiber-aluminum composite, 199 electron microscopy observation of an *in situ* Cu-Nb composite, 59

the thermal expansion of a two-phase composite with body-centred cubic symmetry, 125

Conner

control of intergranular fatigue cracking by slip homogeneity in copper

I: effect of grain size, 95

II: effect of loading mode, 103

electron microscopy observation of an *in situ* Cu-Nb composite, 59

microradiography of creep damage in copper, 51 phase transformations in (Ni,Cu)<sub>3</sub>Sn alloys, 167

preparation of the metastable interstitial copper nitride, Cu<sub>4</sub>N, by d.c. plasma ion nitriding, L1

the effect of environment on the mechanism of fatigue crack initiation and propagation in polycrystalline copper, 83

up-quenching effect on the stabilization process of a Cu-Zn-Al martensite, 247

Cracking

control of intergranular fatigue cracking by slip homogeneity in copper

I: effect of grain size, 95

II: effect of loading mode, 103

on the orientation of cyclic-slip-induced intergranular fatigue cracks in face-centred cubic metals, L21

the effect of environment on the mechanism of fatigue crack initiation and propagation in polycrystalline copper, 83

Creer

microradiography of creep damage in copper, 51 on the cavity-growth-model-based prediction of the stress dependence of time to creep fracture, L5

Crystallization

crystallization of low silicon content Fe-Si-B metallic glasses, 255

Czochralski growth

dynamic strain aging in Czochralski-grown silicon single crystals, 75

Deformation

plastic deformation: a major factor in hydrogen embrittlement of low alloy steel, L11

Diffusion

some correlations between parameters relating to grain boundary self-diffusion in silver, L21

Embrittlement

effect of directional solidification on resistance to hydrogen embrittlement of a stainless steel, 221

plastic deformation: a major factor in hydrogen embrittlement of low alloy steel, L11 **Fatigue** 

control of intergranular fatigue cracking by slip homogeneity in copper

I: effect of grain size, 95

II: effect of loading mode, 103

on the orientation of cyclic-slip-induced intergranular fatigue cracks in face-centred cubic metals, L25

the effect of environment on the mechanism of fatigue crack initiation and propagation in polycrystalline copper, 83

Fracture

effects of nickel additions on the fracture behavior of tempered martensite in medium-carbon 6W steel, 133 in situ fracture experiment on a duplex stainless steel, 157 on the cavity-growth-model-based prediction of the stress dependence of time to creep fracture, L5 the fracture resistance of sintered steel, 149

Graphite

a high resolution transmission electron microscopy study of SiC-coated graphite fiber-aluminum composite, 199

Hardening

the strain hardening behaviour of dual-phase steel, 67 Hydrogen

effect of directional solidification on resistance to hydrogen embrittlement of a stainless steel, 221

plastic deformation: a major factor in hydrogen embrittlement of low alloy steel, L11

Iron

crystallization of low silicon content Fe-Si-B metallic glasses, 255

mechanical properties of Fe-30Mn-10Al-1C-1Si alloy, 141

rapid solidification and self-annealing of Fe-C-Si alloys by low pressure plasma spraying, 207

rapidly solidified thick deposit layers of Fe-C-Mo alloys by flame spraying, 227

Layered structures

extended X-ray absorption fine structure of interfaces of layered structures, 45

Magnesium

characterization of submicrometer phase particles in rapidly solidified Mg-20Nd, 11

the mechanism of superplastic flow in an Al-Mg alloy, L31

Manganese

mechanical properties of Fe-30Mn-10Al-1C-1Si alloy, 141

Martensite

effects of nickel additions on the fracture behavior of tempered martensite in medium-carbon 6W steel, 133 up-quenching effect on the stabilization process of a Cu-Zn-Al martensite, 247

Mechanical properties

mechanical properties of Fe-30Mn-10Al-1C-1Si alloy, 141

Metallic glasses

crystallization of low silicon content Fe-Si-B metallic glasses, 255

Molybdenum

rapidly solidified thick deposit layers of Fe-C-Mo alloys by flame spraying, 227

resistometric study of short-range ordering in Ni-10at.%Mo, L17

Nanocrystalline materials

nanocrystalline materials, 33

Neodymium

characterization of submicrometer phase particles in rapidly solidified Mg-20Nd, 11

Nickel

effects of nickel additions on the fracture behavior of tempered martensite in medium-carbon 6W steel, 133 morphology of zirconia in Y-PSZ sintered with Ni<sub>2</sub>AlTi,

191

phase transformations in (Ni,Cu)<sub>3</sub>Sn alloys, 167

resistometric study of short-range ordering in Ni-10at.%Mo, L17

**Niobium** 

electron microscopy observation of an *in situ* Cu-Nb composite, 59

Nitrogen

preparation of the metastable interstitial copper nitride, Cu<sub>4</sub>N, by d.c. plasma ion nitriding, L1

Phase transformations

phase transformations in (Ni,Cu)<sub>3</sub>Sn alloys, 167

Precipitation

coherent precipitation of M<sub>2</sub>C carbides in AF1410 steel, 215

the effect of cold work on the precipitation kinetics of an advanced austenitic steel, 235

Quenching

up-quenching effect on the stabilization process of a Cu-Zn-Al martensite, 247

Rapid solidification

characterization of submicrometer phase particles in rapidly solidified Mg-20Nd, 11

rapid solidification and self-annealing of Fe-C-Si alloys by low pressure plasma spraying, 207

rapid solidification of lightweight metal alloys, 19

rapidly solidified thick deposit layers of Fe-C-Mo alloys by flame spraying, 227

Short-range ordering

resistometric study of short-range ordering in Ni-10at.%Mo, L17

Silicon

a high resolution transmission electron microscopy study of SiC-coated graphitre fiber-aluminum composite, 199 crystallization of low silicon content Fe-Si-B metallic

glasses, 255 dynamic strain aging in Czochralski-grown silicon single crystals, 75

mechanical properties of Fe-30Mn-10Al-1C-1Si alloy, 141

rapid solidification and self-annealing of Fe-C-Si alloys by low pressure plasma spraying, 207

Silver

some correlations between parameters relating to grain boundary self-diffusion in silver, L21

Sintering

morphology of zirconia in Y-PSZ sintered with Ni<sub>2</sub>AlTi, 191

the fracture resistance of sintered steel, 149

Slin

control of intergranular fatigue cracking by slip homogeneity in copper

I: effect of grain size, 95

II: effect of loading mode, 103

on the orientation of cyclic-slip-induced intergranular fatigue cracks in face-centred cubic metals, L21

Solidification

effect of directional solidification on resistance to hydrogen embrittlement of a stainless steel, 221

Stainless steel

effect of directional solidification on resistance to hydrogen embrittlement of a stainless steel, 221

in situ fracture experiment on a duplex stainless steel, 157 Strain

dynamic strain aging in Czochralski-grown silicon single crystals, 75

the strain hardening behaviour of dual-phase steel, 67

Stress

elastic stress transfer from fiber to coating in a fiber-coating system, 115

on the cavity-growth-model-based prediction of the stress dependence of time to creep fracture, L5

structures and stresses in nanograin thin metal films, 3

Superplastic flow

the mechanism of superplastic flow in an Al-Mg alloy,

Tempering

investigation into the structural evolutions of a low alloy steel during tempering, 175

Thermal expansion

the thermal expansion of a two-phase composite with body-centred cubic symmetry, 125

Thin films

structures and stresses in nanograin thin metal films, 3

Tin

phase transformations in (Ni,Cu)<sub>3</sub>Sn alloys, 167

Titanium

morphology of zirconia in Y-PSZ sintered with Ni<sub>2</sub>AlTi, 191

Transmission electron microscopy

a high resolution transmission electron microscopy study of SiC-coated graphite fiber-aluminum composite, 199

Tungsten

effects of nickel additions on the fracture behavior of tempered martensite in medium-carbon 6W steel, 133

Y-PSZ

morphology of zirconia in Y-PSZ sintered with Ni<sub>2</sub>AlTi, 191

Zinc

up-quenching effect on the stabilization process of a Cu-Zn-Al martensite, 247

Zirconia

morphology of zirconia in Y-PSZ sintered with Ni<sub>2</sub>AlTi,

